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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE		
	Application Number	09/725,957
	Filing Date	30 November 2000
	First Named Inventor	Linda J. HARRIS
	Group Art Unit	1638
	Examiner Name	D. H. Kruse
	Attorney Docket Number	2315-115

Title of the Invention: **TOLERANCE OF TRICHOTHECENE MYCOTOXINS IN PLANTS THROUGH THE MODIFICATION OF THE RIBOSOMAL PROTEIN L3 GENE**

RESPONSE TO RESTRICTION REQUIREMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

In response to Restriction Requirement mailed 11 April 2002, Applicants traverse the restriction as between Groups I and II and the requirement for restriction between species.

There are two criteria for a proper requirement for restriction between patentably distinct inventions: 1) The inventions must be independent or distinct as claimed; and 2) There must be a serious burden on the Examiner if restriction is not required. See MPEP § 803. Examiners must provide reasons and/or examples to support conclusions. For purposes of the initial requirement, a serious burden on the Examiner may be *prima facie* shown if the Examiner shows by appropriate explanation either separate classification, separate status in the art, or a different field of search as defined in MPEP § 808.02. That *prima facie* showing may be rebutted by appropriate showings or evidence by the applicant. Insofar as the criteria for restriction practice relating to Markush-type claims is concerned, the criteria are set forth in MPEP § 803.02. See MPEP § 803. If the members of the Markush group are sufficiently few in number or so closely related that a search and examination of the entire claim can be made without serious burden, the Examiner must examine all claims on the merits, even though they are directed to independent and distinct inventions. In such a case, the Examiner will not require restriction. See MPEP § 803.02.

Although the inventions of Groups I and II may be distinct, as stated in the MPEP, as discussed above, however, distinctness alone is not enough to require a restriction. There must also be a serious burden upon the Examiner. In the absence of such a burden, the Examiner must examine all of the claims. Applicants note that the claims of Groups I and II were examined together in the parent application. Thus, the Patent Office has previously determined that there was no serious burden on the Examiner in examining these two groups.

The claims are directed to the modification of a wild-type nucleic acid to render a host transformed with the modified nucleic acid resistant to trichothecene mycotoxins. Applicants agree that the various nucleic acids/proteins are distinct from each other. However, as stated in the MPEP, as discussed above, distinctness alone is not enough to require a restriction. There must also be a serious burden upon the Examiner. In the absence of such a burden, the Examiner must examine all of the claims (or in this case, it is urged that all of the nucleic acid/protein species in the claims should be examined). It is urged that the burden of examining all of the nucleic acids/proteins of the present application is not a serious one, and that the burden of examining all of the nucleic acids/proteins is only slightly greater than examining one of the groups of nucleic acids/proteins.

The examination entails various aspects. First is a decision concerning utility under 35 U.S.C. §101. Although each nucleic acid/peptide species being claimed is distinct, they are all related in their structure and biological activity. Consequently, a decision concerning utility will be identical for all of the species, and there is no added burden of examining all of the species as compared to examining only a single species.

The second aspect of examination is whether the provisions of the various paragraphs of 35 U.S.C. §112 have been met. In general, and in this case, this means reviewing the application and claims for compliance with the provisions of paragraphs 1 and 2 of §112. As for the enablement aspect as found in paragraph 1 of §112, all of the peptides are related in their structure and biological activity. Since no basis for distinguishing between the enablement of one species vs. another species has been set forth, it is presumed that all of the listed modified nucleic acids/proteins will be treated equally. Again, this means that only a single decision needs to be made concerning all of the nucleic acids/proteins. Therefore, this aspect of the examination will not be a serious burden if all nucleic acids/proteins, vs. only one of the nucleic acids/proteins, are examined.

Concerning paragraph 2 of §112, this involves the wording of the claims. The wording of the claims in each group of claims is identical except for the specified nucleic acids/proteins. Consequently, any objections to the language of the claims for one Group of claims is equally applicable to the other Groups of claims. Therefore there is no increase in the burden concerning 35 U.S.C. §112, second paragraph, if all nucleic acids/proteins are examined.

The third aspect of examination is a review of prior art to determine whether the claims are anticipated or obvious. There are two aspects of such a search. A first aspect is a review of the prior art literature and patents. The literature to be reviewed will be identical for all of the nucleic acids/proteins. All of the claimed peptides have similar, though not identical, structures and all are claimed to have the same utility. The Examiner has not stated that a search of the scientific literature will be any different for one nucleic acid/protein than for any other nucleic acid/protein. The Office Action states that all of the peptides are classified in class 800, subclass 300. That is, a single subclass covers all of the nucleic acids/proteins. Consequently, the search of the patent literature will clearly be the same for all of the nucleic acids/proteins. Because the search of the scientific literature and patent literature will be identical for all of the nucleic acids/proteins, there is no added burden concerning this aspect if all of the nucleic acids/proteins are examined. Furthermore, the search will probably entail a computer search based on the nucleic acid/protein sequences in the sequence listing. It is believed that such a search would identify prior art directed to the claimed nucleic acids/proteins.

Consequently, it is submitted that the only reason for restriction is that the nucleic acids/proteins are distinct from each other. But as explicitly stated in MPEP § 803, the inventions must be distinct and there must be a serious burden on the Examiner. MPEP § 803.02 states that if a search and examination of an entire claim can be made without serious burden, the Examiner must examine all claims on the merits, even though they are directed to independent and distinct inventions. As urged above, it is asserted that examination of all of the nucleic acids/proteins claims will not impose a serious burden.

Furthermore, Applicants note that the protein sequence for all of the species is identical across the 21 amino acid residues as shown in Table 1. A computer search of this sequence would therefore identify all species of the claimed nucleic acids/proteins. Clearly such a single computer

search does not present an undue burden to the Examiner. In addition, as noted on page 22, lines 24-28, there is 92.5% identity between the protein sequences between amino acid residues 209 to 284 of the rice protein. A computer search of this region would also identify each of the protein species disclosed in the application. Again, such a single computer search does not present an undue burden to the Examiner. Thus, Applicants believe that restriction between the proteins of the various plant species is not proper in this case. Consequently, it is submitted that all of the species should be examined together.

In light of the above traversal, Applicants provisionally elect Group I, claims 1-21 for examination and provisionally elect the rice species, the protein of which is set forth in SEQ ID NO:3, for examination. The coding sequence for the rice protein is set forth in Figures 7A-7H.

RESPECTFULLY SUBMITTED,					
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